

REMARKS/ARGUMENTS

Claims 1-11 and 13-25 are pending in the captioned application. Applicants hereby cancel claims 1-10 and 19-25 and add new claims 26-33. Claims 11, 13-18 and 26-33 remain under examination in the instant action. The application has been amended. The claims have been amended. Applicants respectfully request reconsideration and allowance of this application in view of the amendments above and the following comments. Applicants respectfully submit that the amendments are fairly based on the specification and respectfully request their entry.

Specification - Objections

The Examiner objects to two informalities in the specification. First, the Examiner suggests that there appears to be a typographical error on page 28 at lines 18-19.

Applicants submit that the description of the example on page 28, lines 16-19 is clear. It is intended to monitor 'fusions' such as heterokaryon formation by labeling the two cells with, for example, the GFP triple mutants and/or a different fluor. Applicants nonetheless have amended the sentence to make it clearer.

Second, the Examiner objects to the use of trademarks and suggests that they be capitalized and accompanied by the generic terminology. Applicants have amended the specification to fulfill the requirement of the Examiner.

Applicants respectfully submit that these amendments are fully supported by the specification and do not add new matter. Applicants request that the objections to the specification be withdrawn.

Claim Rejections - Enablement

The Examiner has rejected claims 11, 13-18 and 25 under 35 U.S.C. 112, first paragraph, because in the Examiner's view, "the specification, while being enabled for a modified GFP comprising the amino acid sequences set forth in SEQ ID NOS: 2, 3 and 4 wherein the mutations are at positions 64, 65, 222 and 175, does not reasonably provide enablement for a modified GFP and any functional analogue. The specification is also not enabled for functional analogue of the sequences set forth above. The specification does not enable a person skilled in the art to which in pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims."

In response, Applicants respectfully dispute the Examiner's contention, and respectfully assert that the specification provides clear evidence that Applicants "had possession of the claimed invention at the time the instant application was filed."

Specifically, 35 U.S.C. 112, paragraph one, requires that "the specification shall contain a written description of the invention, and of the manner and process of making

and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.”

Applicants respectfully submit that the instant specifications does just this and respectfully point out that the descriptions of green fluorescent proteins(GFP) and GFP analogues as well are described in the mutations which are recited in the claims.

Further, the specification presents specific examples at pages 31-38 which fully describe the embodiments of the instant invention. Applicants respectfully assert that one skilled in the art is properly taught by the specification how to make and use the claimed invention. As such, Applicants respectfully assert that the claims are properly enabled under 35 U.S.C. 112, paragraph one.

Applicants respectfully assert that the experimentation required by one skilled in the art to determine whether a particular mutated GFP or GFP analogue would retain desirable properties and exhibit the properties recited in the claims is relevantly simple and can be easily performed by one skilled in the art. While Applicants realize that this will require some experimentation, Applicants also respectfully assert that the specification, and in particular the examples, provides sufficient written description to

instruct one skilled in the art how to manufacture the claimed products and to determine whether or not those products will fall within the scope of the claims. Applicants respectfully assert that this is all that is required under 35 U.S.C. 112, first paragraph.

Nonetheless, solely to expedite prosecution, Applicants have amended the pending claims by incorporating the Examiner's suggestion and separating the claim language for GFP with a sequence substitution at position S65 into newly added claims. Therefore, the rejection has been obviated. Applicants respectfully request that the rejection be withdrawn.

Claim Rejections – Indefiniteness

The Examiner has rejected claims 11, 13-18 and 25 under 35 U.S.C. 112, second paragraph, as being "indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention." Specifically, the Examiner objects to the use of the terms "derived" and "functional analogue" and suggests that the species name be used to further define the wild-type GFP. The Examiner also asserts that "it is unclear whether the difference in the excitation spectrum is an improvement". Applicants respectfully traverse this rejection. As discussed in detail above, one skilled in the art of molecular biology would well understand these art-recognized phrases, and the metes and bounds of each of the rejected claims are thus definite and fully satisfy the requirements of the statute. Applicants also direct Examiner's attention to Figures 5 and

6, which clearly show the improvement of the fluorescent proteins of the instant invention over the wild-type protein, in terms of the greater fluorescence signal and /or reduced photobleaching relative to the wild-type proteins.

Applicants have also amended the claims by voiding the phrase “derived from”, and adding the species name “*A. victoria*”. Additionally, Applicants have separated the claim language for GFP with a sequence substitution at position S65 by introducing a new set of claims. Therefore, the rejection has been obviated. Applicants respectfully request that the rejection be withdrawn.

Claim Rejections – Anticipation

Claim 11 is rejected under 35, U.S.C. § 102(b) as being anticipated by Bastiaens et al., WO 00/08054, 17 February 2000 (hereinafter “Bastiaens”).

The Examiner asserts that Bastiaens discloses polynucleotides encoding fluorescent proteins obtained from (GFP) having mutations at positions F64, S65 and S175. In response, Applicants have amended claim 11 and introduced new claims 26-33. Applicants submit that the amendments obviate the rejection and the claims are now in allowable form.

Applicants believe that the foregoing constitutes a full and complete response to all outstanding objections and rejections. Applicants further believe that this application is now in condition for allowance. However, should any issues remain, the Examiner is respectfully requested to telephone the undersigned at (732) 908-2875 so that the issues might be promptly resolved.

Early and favorable action is earnestly solicited.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop – Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on July 26, 2004.

Signature: 

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